From: Jay Field
To: Eric Blischke/R10/USEPA/US@EPA
Cc: Benjamin Shorr; Burt Shephard/R10/USEPA/US@EPA; Joe Goulet/R10/USEPA/US@EPA; rgensemer@parametrix.com; Chip Humphrey/R10/USEPA/US@EPA
Subject: Re: Interpretation of Empirical Bioassay Data at Portland Harbor
Date: 05/29/2009 03:14 PM

Eric,
I checked my database and the values/levels below all match. Possibly the file Ben was using either was based on an earlier version of the reference table (before I received John's table RE-2) or I made a mistake in creating the file for Ben. I hope it didn't cause any problems. I'll check with Ben to see what file he was using.
Jay

Blischke.Eric@epamail.epa.gov wrote:

> Jay, over the past two days, we participated in a meeting with the LWG to discuss and reach agreement on AOPCs at the Portland Harbor Site. Based on our data retreat held earlier this month, we determined that for the most part, AOPCs could be identified based on PCBs, B(a)P and sediment toxicity. We assessed sediment toxicity using the bioassay evaluation that you performed based on the reference envelope. This information was converted into a layer in the GIS tool by Ben Shorr.
>
> During our discussions with the LWG, it became apparent that the LWG's interpretation of the bioassays did not match ours. I have attempted to look into this somewhat and it appears to me that the analysis that you performed was consistent with the March 31, 2009 direction that we provided to the LWG.
>
> Table RE-2 in the March 31 direction provided the following criteria for identifying level 1, 2, and 3 hits:

Table RE-2: Biological effect levels for sediment toxicity test results, in terms of proportional response relative to reference envelope sediments.

Test	No effect level	Minor effect level	Moderate effect level	Severe effect level
Hyalella azteca 28-day mortality	Survival ≥ 0.895	0.895 > survival ≥ 0.806	0.806 > survival ≥ 0.716	Survival < 0.716
Hyalella azteca 28-day biomass	Biomass ≥ 0.732	0.732 > biomass ≥ 0.659	0.659 > biomass ≥ 0.585	Biomass < 0.585
Chironomus tentans 10-day mortality	Survival ≥ 0.948	0.948 > survival ≥ 0.854	0.854 > survival ≥ 0.759	Survival < 0.759
Chironomus tentans 10-day biomass	Biomass ≥ 0.953	0.953 > biomass ≥ 0.856	0.856 > biomass ≥ 0.761	Biomass < 0.761

> A quick review of some of the AOPCs in question resulted in the following bioassay interpretations:
>
> AOPC 10
>
> G638 - Level 2 hit (Hy biomass) - 61.97%
> G6371 - Level 2 hit (Hy biomass) - 62.65%
>
> AOPC 5
>
> G133 - Level 2 hit (Ch survival) - 81.94%
> G622 - Level 2 hit (Hy biomass) - 64.67%
> G121 - Level 2 hit (Ch survival and biomass) - 83.3 and 83.3%
>
> AOPC 4
>
> G105 - Level 3 hit (Ch survival and biomass) - 68.06 and 61.42%
>
> AOPC2

G6121 - Level 3 hit (Hy biomass) 58.49%
G061 - Level 2 hit (Hy biomass) - 64.45%
G613 - Level 2 hit (Hy bi0mass) - 64.64%

AOPC 8

G155 - Level 3 hit (Ch biomass) 66.40%
G157 - Level 3 hit (all 4 endpoints) - 14 - 50%
G160 - Level 3 hit (Ch survival and growth) 19 - 43%
G161 - Level 3 hit (all 4 endpoints) 30 - 70%)

These all seem to match up with the above table. Let me know if I am missing anything.

John Toll may be calling you to discuss this with you and you may need to confirm your evaluation. Please let me know if I am missing anything here. We will likely need to get the results of the LWG bioassay interpretation and have a call between you, John, Burt and myself to resolve this.

Thanks, Eric

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